

Claims

1. A method of measurement reporting in a telecommunication system comprising mobile stations and a network comprising base stations, wherein decisions upon establishing or canceling a communication link between a mobile station and a base station are made in the network on the basis of measurement reports sent from the mobile station to the network,

characterized in that the method comprises the steps of
defining first and second sets of trigger conditions corresponding, respectively, to radio signal properties in the uplink and downlink directions,
defining a logical function for combining said first and second sets of trigger conditions,

at the mobile station, determining the state of each trigger condition, combining the states according to the logical function, and sending a measurement report to a base station in dependence upon the condition of the logical function.

2. A method according to claim 1, **characterized** in that the first and second set of trigger conditions are dynamically defined by the network.

3. A method according to claim 1, **characterized** in that the logical function is defined by the network.

4. A method according to any of the preceding claims **characterized** in that

a first combination of the first and second sets of trigger conditions and the logical function are defined to be used for radio signals from or to active base stations having an active link with the mobile station,

a second combination of the first and second sets of trigger conditions and the logical function are defined to be used for radio signals from or to candidate base stations not having an active link with the mobile station, and

at the mobile station, the first combination is used for radio signals from or to active base stations having an active link with the mobile station and the second combination is used for radio signals from or to candidate base stations not having an active link with the mobile station.

5. A method according to claim 4, and comprising the step of creating an active link between the mobile station and a candidate base station not having an active link with the mobile station when the network

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interference power made after the signal has been correlated with the spreading code used in the connection.

14. A method according to claims 1 or 10 to 13, **characterized** in that at least one of the sets of trigger conditions is a condition for the change
5 of the parameters of the received radio signals or a function thereof.

15. A method according to any of claims 11 to 14, **characterized** in that the trigger conditions comprise at least one base station specific offset value.

16. A method according to claim 15, **characterized** in that at least
10 one of the offset values is dynamically defined by the network.

17. A method according to claim 1, **characterized** in that the network informs the mobile station what information to include in the measurement report, and the mobile station includes this information in the measurement report.

18. A method according to claim 17, **characterized** in that the
15 radio signals are ordered using a predefined condition, and in the measurement report sent from the mobile station, information about the properties of a predefined number of the best radio signals according to the condition are reported.

19. A method according to claim 17, **characterized** in that the
20 number of radio signals to be reported is given by the network.

20. A method according to claim 17, **characterized** in that the measurement report comprises a value for the path loss for a reported signal or a function thereof.

21. A method according to claim 17, **characterized** in that the
25 measurement report comprises a value for the carrier to interference ratio of a reported signal of a function thereof.

22. A mobile station for a telecommunication system comprising mobile stations and a network comprising base stations, wherein the mobile
30 stations monitor the radio signals sent by the base stations,

characterized in that the mobile station has
receiving means for receiving information about first and second set of trigger conditions corresponding, respectively, to uplink and downlink signals and a logical function,

35 monitoring means for monitoring radio signals,

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checking means which is responsive to the receiving means and the monitoring means and which has the functionality of checking the state of each trigger conditions,

- 5 combining means responsive to the checking means for combining the states according to the logical function, and

sending means responsive to the combining means for sending a measurement report to the base station.

23. A mobile station according to claim 22 **characterized** in that the receiving means are arranged to receive a first combination of a first and a second set of trigger conditions and the logical function and a second combination of a first and a second set of trigger conditions and the logical function, and

- 10 the checking means and the combining means are arranged to use the first combination for radio signals from or to active base stations having an active link with the mobile station and the second combination is used for radio signals from or to candidate base stations not having an active link with the mobile station.

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